

DC RANCH NEIGHBORHOOD PARK SITE TRAFFIC IMPACT ANALYSIS SUMMARY

EXISTING CONDITIONS

The subject site is located near the southeast corner of Pima Road and Union Hills Drive. The parcel is identified as Parcel 1.4 of DC Ranch's Planning Unit I. Pima Road is designated as a parkway, which typically consists of three lanes in each direction. Currently the street is constructed with two lanes in each direction with a center left-turn median. Union Hills Drive is designated as minor arterial adjacent to the site. It is currently constructed as a half street, with one lane in each direction. Union Hills does not connect to the existing Pima Road alignment. Pima Road has a design capacity of 35,000 vehicles per day; Union Hills Drive has a design capacity of 5,000 vehicles per day.

Facilities: The site is currently undeveloped. The DC Ranch land use plans identify the parcel as a neighborhood park.

Site Access: The site does not have existing access. The parcel is separated from Pima Road by property owned by the State Land Department. The parcel is separated from Union Hills Drive by property that is part of DC Ranch. This property is planned to be developed as part of their Planning Unit I; however, there is no existing development or infrastructure.

Traffic: Currently on Pima Road there are approximately 42,500 vehicles per day. On Union Hills Drive, which currently does not connect to Pima Road or to any major roads to the east, there is a negligible amount of traffic.

Level of Service: Level of service (abbreviated LOS) is a measure of how congested an intersection or section of roadway is under specific traffic conditions. The intersections that serve the site do currently not exist; therefore, level of service could not be determined.

PROPOSED DEVELOPMENT

A traffic impact study was prepared by Kimley-Horn and Associates, which examined the impacts from the proposed development under two access scenarios. The proposed aquatic center development includes a community park with proposed amenities such as an aquatic center, a fitness center, playground, and open recreation areas. Access to the site under Access Scenario A assumes a restricted access connection from Pima Road to a proposed "Loop Road" in Planning Unit I. Access under Access Scenario B assumes a signalized connection from Pima Road to the Loop Road. The Loop Road connects Union Hills Drive to 94th Street. The park site entrance is assumed to be located on the Loop Road. The connection from Pima Road to the Loop Road is referred to as the "Connector Road" in this analysis.

ACCESS SCENARIO A

Facilities: The aquatic center would contain a 25-yard competitive area with a leisure pool component. The fitness center would be ancillary to the pool facility. The playground and open recreation areas would be similar to those found in other public parks within the city.

Site Access: Access to the site would be provided by Pima Road, Union Hills Drive, 94th Street, and the proposed Loop Road. 94th Street is planned to be constructed as a two lane minor collector with a center turn lane from Union Hills Drive to Bell Road; the design capacity is 15,000 vehicles per day. The Loop Road is planned to be constructed

as a two lane minor collector with a center turn lane that transitions to a two lane local collector; the design capacity for the minor collector is 15,000 vehicles per day, the local collector is 5,000 vehicle per day. Union Hills Drive, 94th Street, and the Loop Road are all planned to be constructed as a Communities Facilities District (CFD) by DC Ranch. It is anticipated that the streets will be constructed by the summer of 2004.

There is also a proposed connection from Pima Road to the Loop Road, which would be located south of Union Hills Drive. Under Access Option A it is assumed that the intersection will be unsignalized and restricted to left-in, right-in, right-out access at Pima Road.

Traffic: The estimated trip generation for the proposed development is shown in the table below. This trip generation is based on data collected at the City's Cactus Park. It is assumed that the aquatic and recreational facilities will be similar at the two park sites.

Trip Generation

| Land Use | Daily Total | AM Peak Hour | | | PM Peak Hour | | |
|---|-------------|--------------|-----|-------|--------------|-----|-------|
| | | In | Out | Total | In | Out | Total |
| Aquatic Center and Park Facilities | 2,740 | 45 | 32 | 77 | 287 | 245 | 532 |

The a.m. peak hour represents the highest hourly volume expected during the 7 a.m. to 9 a.m. normal rush hour period. The p.m. peak hour is the highest hourly volume expected during the 4 p.m. to 6 p.m. normal rush hour period.

Level of Service: The study intersections are projected to operate at acceptable levels of service with or without the project traffic (LOS D or better) with the exception of the left-turn movement on Pima Road at the Connector Road. This unsignalized movement is projected to operate a LOS F due to a lack of acceptable gaps in the Pima Road traffic.

ACCESS SCENARIO B

Facilities: The development plan is the same under both access scenarios: the park will have an aquatic center with a leisure pool component, fitness center, playground and open recreation areas.

Site Access: Access to the site would be the same under Access Scenario B as was described for Access Scenario A with one exception: the connection from Pima Road to the Loop Road is assumed to be signalized at Pima Road.

Traffic: The estimated trip generation for the proposed development is the same under both access scenarios.

Trip Generation –Option B

| Land Use | Daily Total | AM Peak Hour | | | PM Peak Hour | | |
|---|-------------|--------------|-----|-------|--------------|-----|-------|
| | | In | Out | Total | In | Out | Total |
| Aquatic Center and Park Facilities | 2,740 | 45 | 32 | 77 | 287 | 245 | 532 |

Level of Service: The study intersections are projected to operate at acceptable levels of service with or without the project traffic (LOS D or better). Providing signalized access on Pima Road at the Connector Road facilitates traffic movement into and out of

the site; however, a traffic signal located approximately one-quarter mile north of the 101 Freeway Interchange will negatively impact traffic flow on Pima Road.

COMPARATIVE LEVELS OF SERVICE

Level of Service/Average Control Delay (in seconds) Signalized Intersections

| | Access Scenario A | | | | Access Scenario B | | | |
|--------------------------------|--------------------|-------|---------------|-------|--------------------|-------|---------------|-------|
| | Background Traffic | | Total Traffic | | Background Traffic | | Total Traffic | |
| A.M. Peak Hour | LOS | Delay | LOS | Delay | LOS | Delay | LOS | Delay |
| Union Hills & Loop Road | B | 11.7 | B | 12.1 | A | 6.8 | A | 7.0 |
| Bell & 94 th Street | A | 9.1 | A | 9.2 | B | 18.1 | B | 18.1 |
| Pima & Union Hills | B | 19.0 | B | 19.3 | B | 17.4 | B | 17.5 |
| Pima & Connector Road | n/a | n/a | n/a | n/a | A | 3.5 | A | 3.9 |
| | | | | | | | | |
| P.M. Peak Hour | LOS | Delay | LOS | Delay | LOS | Delay | LOS | Delay |
| Union Hills & Loop Road | C | 22.4 | C | 24.0 | B | 13.7 | B | 13.5 |
| Bell & 94 th Street | B | 14.3 | B | 14.9 | C | 24.3 | C | 24.9 |
| Pima & Union Hills | C | 23.7 | C | 25.5 | B | 17.7 | B | 18.2 |
| Pima & Connector Road | n/a | n/a | n/a | n/a | B | 10.9 | B | 13.8 |

Level of Service/Average Control Delay (in seconds) Unsignalized Intersections

| | Access Scenario A | | | | Access Scenario B | | | |
|----------------------------------|--------------------|-------|---------------|-------|--------------------|-------|---------------|-------|
| | Background Traffic | | Total Traffic | | Background Traffic | | Total Traffic | |
| A.M. Peak Hour | LOS | Delay | LOS | Delay | LOS | Delay | LOS | Delay |
| 94 th St. & Loop Road | | | | | | | | |
| NB Left | A | 7.9 | A | 8.0 | A | 7.9 | A | 8.0 |
| SB Left | A | 7.4 | A | 7.4 | A | 7.4 | A | 7.4 |
| EB LT/Thru | C | 16.5 | C | 17.3 | C | 16.5 | C | 17.3 |
| WB Left/Thru | C | 17.9 | C | 19.3 | C | 17.9 | C | 19.2 |
| | | | | | | | | |
| Pima & Connector Road | | | | | | | | |
| SB Left | F | 50.4 | F | 52.3 | n/a | n/a | n/a | n/a |
| WB Right | B | 5.8 | B | 5.8 | n/a | n/a | n/a | n/a |
| | | | | | | | | |
| P.M. Peak Hour | LOS | Delay | LOS | Delay | LOS | Delay | LOS | Delay |
| 94 th St. & Loop Road | | | | | | | | |
| NB Left | A | 7.6 | A | 7.9 | A | 7.6 | A | 7.9 |
| SB Left | A | 7.7 | A | 7.7 | A | 7.7 | A | 7.7 |
| EB LT/Thru | C | 14.5 | C | 20.0 | B | 14.5 | C | 20.0 |
| WB Left/Thru | C | 17.8 | D | 31.1 | C | 17.8 | D | 30.4 |
| | | | | | | | | |
| Pima & Connector Road | | | | | | | | |
| SB Left | F | 120 | F | 120 | n/a | n/a | n/a | n/a |
| WB Right | B | 8.7 | B | 9.4 | n/a | n/a | n/a | n/a |

Additional Information:

The final alignment for Pima Road has not been determined and impacts access to this site. The existing Pima Road does not follow the City's General Plan alignment. The City's Transportation Department is currently working with the concerned citizens and property owners to develop a Design Concept Report for the final alignment. A preliminary estimate for construction of this section of Pima Road, which would construct a six lane cross section with a raised median, is planned for the summer of 2005.

Summary:

Development of a community park (with proposed amenities such as an aquatic center, a fitness center, playground, and open recreation areas) would result in an estimated 2,740 daily trips. There would be an estimated 77 trips during the a.m. peak hour, and 532 trips during the p.m. peak hour.

There is currently no vehicular access provided to the site. Infrastructure will be constructed with the development of DC Ranch's Planning Unit I. A Communities Facilities District will construct Union Hills Drive, 94th Street, and the Loop Road by the summer of 2004. The site entrance is planned to be on the Loop Road.

Site generated traffic will utilize the Loop Road, a minor collector/local collector roadway, to access the site. The Loop Road is projected to have 2,600 vehicles per day on the local collector portion of the roadway. Access Scenario A adds an estimated 1,100 vehicles per day to this section of the Loop Road; Access Scenario B adds an estimated 1,160 vehicles per day to this section.

Two different access scenarios were examined. Access Scenario A assumes that there is a connection from Pima Road to the Loop Road with unsignalized, restricted access on Pima Road. Access Scenario B assumes that this intersection is signalized at Pima Road. The study intersections operate at acceptable levels of service under either access scenario with the exception of the Pima Road/Connector Road intersection. If this intersection is assumed to be unsignalized, it operates at LOS F. If it is assumed to be signalized, it operates at LOS A; however, there will be a negative impact to traffic flow on Pima Road if a signal is constructed at one-quarter mile north of the 101 Freeway Interchange.